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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,126	02/15/2001	Jeong-Hoon Park	Q62554	1502

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EXAMINER

ABRAHAM, ESAW T

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,126

Applicant(s)

PARK ET AL.

Examiner

Esaw T Abraham

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/25/04 (amndt).
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-39 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 02/15/01 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/24/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to the applicant's amendments

*****Applicant's argument/amendments with respect to amended claims 36-38 and original claims 1-35, 39 filed on 06/25/04 have been fully considered. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sen et al. and Gage et al.

***** The corrected claims (36-38) to overcome 112, second paragraph rejection is accepted by the examiner.

DETAILED ACTION

1. Claims 1-39 are presented for examination.

Information Disclosure Statement

2. The applicant's IDS of (25 June 2005) have been entered. The examiner considers the IDS.

Drawings

3. The drawings are objected to as failing to comply with 37CFR 1.84(p) (5) because some of the characters and symbols in the drawings are difficult to read due to the poor quality of the faxed drawings. For example; see figure 4, block (410).

Corrected drawings sheets in compliance with 37 CFR 1.121(d) are required in reply to the office action should include all the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be cancelled, the

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appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheet may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header so as not to obstruct any portion of the drawing figures. If the changes are not acceptable by the examiner, the applicant will be notified and informed of any required corrective action in the next office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:
 - a) Please change the phrase "an MUX sub layer" to read as "a MUX sub layer" (see page 1, line 12).
 - b) On page 1 line 14 of the specification, "the physical layer 130" is unknown to the drawings and if the applicant is referring to figure 1, the reference character should be changed to read as "the physical layer 140".

Appropriate correction is required.

Claim objections

5. Claims **4 and 10-14**, are objected to because of the following informalities:
 - a) Please define the full word of a written word or phrase for the abbreviations "RLP and MUX" as specified in the specification (see claims 10-14).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

b) Claim 1 recites “application data ” on lines 5 and 7 (Note: it is not clear whether “application data ” refers to “application data service” in line 2. There is insufficient antecedent basis for this limitation in the claim.

a) Claim 4 recites the limitation “the application data” in lines 4 and 5. There is insufficient antecedent basis for this limitation in the claim.

b) Claim 4 recites the term “about the application data”. There is insufficient antecedent basis for this limitation in the claim (see claim 4, line 4).

The examiner would appreciate if the applicant would clarify this matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere CO.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims **1-39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sen et al (U.S. PN: 6,765,909) in view of Gage et al. (U.S. PN: 6,515,972).

As per claims **1, 4, 5 and 39**, Sen et al. a wireless communication networks and particularly to service levels within the communication networks (see col. 1, lines 15-20) Sen et al. teach a classification application utilizing a table (catalog information) of connection numbers and associated Ids is utilized of service level decoding (deciphering) a connection number field of the compressed IP packet header and packets carrying different connection numbers mapped to different quality of service planes (see col. 3, lines 24-31). Sen et al. teach that when a non-active TCP connection becomes active, the classification detects and identifies the connection by reading the connection number field of the compressed TCP/IP header in the packet of application (see col. 3, lines 30-33) and further Sen et al. teach a method steps for detecting an active data packet connection, including a data pack, decoding a connection number field in a compressed header of said data packet to determine a connection number for said data packet and furthermore providing a table comprising a first set of data and second set of data, said first set of data containing a plurality of identified connection numbers, and said second set of data containing a corresponding quality of service plane for each identified connection number in the

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table (see claim 1) which Sen is basically employing a process for detecting packets the same as the applicant's invention. Sen et al. **do not explicitly teach** adding error-detecting codes to the application data. **However**, Gage et al. in an analogous art teach a radio link protocol to a data link for wireless systems (see col. 1, lines 6-8). Gage et al. teach that an RLP type based on the generic service(s) available to mobile station, as for example voice services, packet data services, and/or circuit switched data services and the voice service may use an RLP providing error detection and forward error correction, the packet data service may use an RLP providing error detection and retransmissions, while the circuit switched data service may use an RLP providing transparent bit service (see col. 3, lines 33-67). **Therefore**, it would have been obvious to a person having an ordinary skill in the art at the time the invention was made implement the system of Sen et al. employing a process for detecting error packets as taught by Gage et al. **This modification** would have been obvious because a person having ordinary skill in the art would have been motivated in order to improve efficiency and improve the information bit rate.

As per claim 2, Sen et al. teach that an IP packet is sent over a serial line and is passed through a V-J Header compressor. The compressor checks if the protocol is TCP and marks the packets as TYPE_IP if the packets are non-TCP or un-compressible and passed to a PPP framer (see col. 5, lines 28-35).

As per claim 3, Sen et al. teach that a classification application utilizing a table of connection numbers and associated TCP/IP applications is utilized for determining a wireless packet communication, quality of service level by decoding (deciphering) a connection number field of the compressed packet header (see abstract).

As per claims 6-9, Gage et al. teach that an RLP type based on the generic service(s) available to mobile station, as for example voice services, packet data services, and/or circuit switched data services and the voice service may use an RLP providing error detection and forward error correction, the packet data service may use an RLP providing error detection and retransmissions, while the circuit switched data service may use an RLP providing transparent bit service (see col. 3, lines 33-67).

As per claims 10-15, Sen et al. in figure 2 teach an adaptation control (208) utilizes resource control (210) to determine specific QoS classes for detected and identified signals and the resource control contains a database of user profiles that include class of service for each customer that accesses the system. An incoming voice signal is transmitted via MSC (216) to Mux and QoS sublayer in BTS (215), the voice signal is then transmitted from (BTS 215) to receiving device (218) and all data signals are transmitted through QAS (206). LAC/MAC (212) instances associated with different QoS classes have different mechanisms controlling the radio resources to achieve corresponding QoS requirements and different LAC/MAC ARQ and RLP require a different set of dedicated physical layer channels with specific QoS capabilities (see col. 4, lines 27-67).

As per claims 16-19, Sen et al. in figure 2 teach an adaptation control (208) utilizes resource control (210) to determine specific QoS classes for detected and identified signals and the resource control contains a database of user profiles that include class of service for each customer that accesses the system. An incoming voice signal is transmitted via MSC (216) to Mux and QoS sublayer in BTS (215); the voice signal is then transmitted from (BTS 215) to receiving device (218) and all data signals are transmitted through QAS (206). LAC/MAC (212)

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instances associated with different QoS classes have different mechanisms controlling the radio resources to achieve corresponding QoS requirements and different LAC/MAC ARQ and RLP require a different set of dedicated physical layer channels with specific QoS capabilities (see col. 4, lines 27-67).

As per claims **20-24**, Gage et al. teach AIPs define a limited number of RLPs and select the RLP for a connection during the connection setup phase based on the service requirements and the service is defined by the type of information transmitted (i.e. voice, packet data, control packet, etc.) and by the quality of service (QoS) required and the quality of service (QoS) of a particular type of service is dependent upon the errors encountered over the communication link, the delays encountered in transmitting the information, and/or the information lost while transmitting over the communications link (see col. 1, lines 49-59).

As per claims **26-28**, Sen et al. teach that an integrated Services provides end to end QoS with by reserving resources for data traffic and signaling is a protocol that reserves the resources so as to provide the required QoS and further the integrated service is independent of the actual mechanism used to provide the reservations, but integrated services specifies generically traffic and path characteristics for a transmission (col. 2, lines 21-26).

As per claims **29-32**, Sen et al. teach that classification application utilizing a table of connection numbers and associated TCP/IP applications is utilized for determining or judging a wireless packet communication, quality of service level by decoding a connection number field of the compressed packet header (see abstract).

As per claims **33-38**, Gage et al. teach that an RLP type based on the generic service(s) available to mobile station, as for example voice services, packet data services, and/or circuit

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switched data services and the voice service may use an RLP providing error detection and forward error correction, the packet data service may use an RLP providing error detection and retransmissions, while the circuit switched data service may use an RLP providing transparent bit service (see col. 3, lines 33-67).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US PN: 6,781,971 Davis et al.

US PN: 6,778,58 Balachandran et al.

US PN: 6,606,331 Wang et al.

US PN: 6,785,227 Lu et al.

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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Esaw Abraham

Esaw Abraham

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Guy J. Lamarre
Primary Examiner